

NOISE IMPACT RESULTS

APPENDIX 3.4-D**NOISE IMPACT RESULTS****No Project/No Action Alternative (No Project)**

For the No Project Alternative, potential noise impacts associated with existing highways and improvements committed through the year 2020 were obtained from exercising the screening analysis for residential population, schools, hospitals and parklands. Potential airport noise impacts were assessed for the same period based on published noise contour maps prepared by major civil airports to assist local agencies with land development and zoning. The 65 community noise equivalent level (CNEL) contour is typically considered the limit of compatible residential land use in the vicinity of airports. Projected operational growth at a particular airport was used to estimate the increased area within the 65 CNEL contour for the year 2020 and the corresponding increase in potential population impacts. Because available information is limited, potential impacts for expected future (2020) rail conditions were not included in the impact tabulations. Regional results of the No Project screening procedure are shown in Table 3.4-D-1.

**Table 3.4-D-1
Potential Noise Impacts of the No Project Alternative**

Region	People (A-11)	People (A-16)	Hospitals	Schools	Park (acres)	Airport (number of people)
Bay Area to Merced	63,151	290	2	29	660	2,342
Sacramento to Bakersfield	17,316	478	1	12	142.8	Not Available
Bakersfield to Los Angeles	12,869	112	0	3	1,476	2,115
Los Angeles to San Diego via Inland Empire	41,646	0	1	6	162	3,407
Los Angeles to San Diego via Orange County	25,270	41	6	3	307.9	2,012
Totals (via Inland Empire)	134,982	880	4	50	2,440.8	7,864
Totals (via LOSSAN)	118,606	921	9	47	2,586.7	9,466

The results of the screening procedure were used to develop the noise impact ratings for each alternative in each region. Lengths of the highway segments considered for the No Project Alternative are rated in Table 3.4-D-2.

Table 3.4-D-2
Impact Ratings for the No Project Alternative

Region	Length (miles)		
	High	Medium	Low
Bay Area to Merced	93	266	302
Sacramento to Bakersfield	26	63	739
Bakersfield to Los Angeles	23	0	199
Los Angeles to San Diego via Inland Empire	78	14	118
Los Angeles to San Diego via Orange County	61	43	14
Totals (via Inland)	219	343	1,358
Totals (via LOSSAN)	203	372	1,254

Modal Alternative

Potential noise impacts for the Modal Alternative associated with highway expansions were obtained from the screening analysis. These potential impacts can be used to compare with the overall results of the No Project Alternative highway potential impacts HST potential impacts. As under the No Project Alternative, the aviation component increases the number of people impacted and the degree of impact for the Modal Alternative. The results of the screening procedure applied to the Modal Alternative are shown in Table 3.4-D-3. It was found that the number of people impacted by the aviation component is small compared to the highway component. Because of limited or nonexistent information, potential impacts for expected future (2020) rail conditions were not included in the impact tabulations. Therefore the comparison between the Modal Alternative and the HST Alternative is somewhat conservative in that the Modal Alternative potential impacts are underestimated.

Table 3.4-D-3
Potential Noise Impacts of Modal Alternative

Region	People (A-11)	People (A-16)	Hospitals	Schools	Park (acres)	Airport (number of people)
Bay Area to Merced	71,925	360	3	34	892	3,424
Sacramento to Bakersfield	21,159	587	2	15	177.9	
Bakersfield to Los Angeles	18,976	65	0	6	1,811	3,149
Los Angeles to San Diego via Inland Empire	54,915	49	3	8	183	5,159
Los Angeles to San Diego via Orange County	31,628	52	3	9	366.3	2,893
Totals (via Inland Empire)	166,975	1,061	8	63	3,063.9	11,732
Totals (via LOSSAN)	143,688	1,064	8	64	3,247.2	9,466

The results of the screening procedure shown in Table 3.4-D-3 were used to develop the noise impact ratings for each alternative in each region. Lengths of the highway segments considered for the Modal Alternative are rated in Table 3.4-D-4.

Table 3.4-D-4
Impact Ratings for Modal Alternative

Region	Length (miles)		
	High	Medium	Low
Bay Area to Merced	93	266	302
Sacramento to Bakersfield	26	81	721
Bakersfield to Los Angeles	23	0	199
Los Angeles to San Diego via Inland Empire	78	14	118
Los Angeles to San Diego via Orange County	61	43	14
Totals via Inland	220	361	1,341
Totals via LOSSAN	203	390	1,237

HST Alternative

Potential impacts from the entire HST Alternative were obtained from the screening analysis. The results of the screening analysis can be used to compare potential impacts between regional alignment options and the highway potential impacts assessed for the Modal Alternative and No Project Alternative. Residential, park, and institutional noise impact summaries are based upon the GIS land use and location data made available for the screening study and the corresponding screening distances used for each alignment segment. In order to provide a full range of noise potential impacts, the two combinations of HST segments that produce the least and the greatest potential impacts were determined. The screening results for HST alone are shown in Tables 3.4-D-5 and 3.4-D-7. The results of the screening procedures were used to develop the noise impact ratings for the HST segments in each region. For the Statewide summary, the LOSSAN Corridor is not included in the HST impact inventory. The combinations that yielded the greatest potential impacts and the least potential impacts were rated, as shown in Tables 3.4-D-6 and 3.4-D-8. Details are given in the Technical Reports.

Table 3.4-D-5
Potential Noise Impacts of HST Alone (Combination of Segments with Greatest Impact)

Region	People (A-11)	People (A-16)	Hospitals	Schools	Park (acres)
Bay Area to Merced	26,102	45	1	9	39
Sacramento to Bakersfield	11,431	583	1	9	72.5
Bakersfield to Los Angeles	5,288	0	0	3	928
Los Angeles to San Diego via Inland Empire	25,776	47	1	6	285
Totals (via Inland Empire)	68,597	675	3	27	1,324.5

Table 3.4-D-6
Impact Ratings for High-Speed Train
(Combination of Segments with Greatest Impact)

Region	Length (miles)		
	High	Medium	Low
Bay Area to Merced	55.7	146.6	0
Sacramento to Bakersfield	0	0	385.8
Bakersfield to Los Angeles	13.3	12.9	84.9
Los Angeles to San Diego via Inland Empire	95.4	0	74.2
Totals (via Inland)	164	160	545

Table 3.4-D-7
Potential Noise Impacts of HST (Combination of Segments with Least Impact)

Region	People (A-11)	People (A-16)	Hospitals	Schools	Park (acres)
Bay Area to Merced	16,713	175	1	5	1,110
Sacramento to Bakersfield	3,567	40	0	8	100
Bakersfield to Los Angeles	3,652	0	1	2	108
Los Angeles to San Diego via Inland Empire	10,053	0	0	6	82
Totals via Inland	33,985	215	2	21	1,400

Table 3.4-D-8
Noise Impact Ratings of High-Speed Trains
(Combination of Segments with Least Impact)

Region	Length (miles)		
	High	Medium	Low
Bay Area to Merced	50	0	103.2
Sacramento to Bakersfield	0	0	316
Bakersfield to Los Angeles	13.3	9.7	113.7
Los Angeles to San Diego via Inland Empire	0	66.9	83.6
Totals (via Inland)	63	77	617